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SEQUENCE LISTING

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<160> 49

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 1090

<212> DNA

<213> Psuedomonas fluorescens

<220>

<221> variation

<222> (1)...(1090)

<223> n is a, t, c, or g.

<400> 1

gagcgacgna	gaggaagngn	gggagganga	ggaaggagga	gagnggaaga	agggggggaag	60
gggagggggg	aaggagagn	ggggagnngg	gggnatnngg	gannngggng	gggngngggn	120
ntgnttatna	tnangctccg	gccggacgaa	gaaattcccg	atgcattgct	cgagcgcgta	180
ggcctgtctc	gggacaaggt	caaccacgta	ttcagcaaag	tgctcnaggc	ggaantgctg	240
ctgcgcgaac	tggcctcgca	nttcagccac	ggctgaatag	gctcgcccg	tcatttgatc	300
tttccacgc	tctgcgtggg	aatgcacccc	gtgacgctct	gcgtcacatc	tcagaagcgg	360
aacgcggagc	gtccctggcg	acnttcccnc	ncaggagagc	tggggaaccn	ancaaacntg	420
gtccctcgca	ttntaaagtt	cttccttaaa	ancttcttnc	gggcttccag	ggtattttgg	480
tccancccc	ttgggaaccc	anatecccca	ggcgcccccg	ggttgccccn	tttgatcctg	540
gggatccga	ctttgttcc	tgnaaatccc	cccttccatt	gaaaccnccc	angtttngcc	600
ttttgtttcc	ctttgggcc	ntnccaatcc	gntgnggcaa	aaacgccc	atggggcgng	660
ggcggtccc	ccccccnccg	nntgttactn	aantncanaa	cgccnnttgg	gccanaaann	720
tcgnctngng	nnnnnnccnc	gncttctttn	ctnccctccc	nnctntnnt	cctcngtgta	780
tnccaantc	ntnccnccgc	ccntccngcc	tccccactnc	ctnngccctc	cnnnccnccg	840
cgttnccatn	ctcncnccn	ntccgcttnt	ccccntttan	cgtngccggt	ncccgcccg	900
nnnnngtca	tcnntgncgc	tcttccnccc	nccctgtccn	cccantgccc	ngnnnctccg	960
aggtcgcnng	tctcncncc	nccngnttcg	tgcnngggcn	cnngatcccg	ttcncnccng	1020
nccntnatgc	tgaccagtnn	gngngngtng	nnnccctccc	tcngnacntg	tntngngggg	1080
gggccncccc						1090

<210> 2

<211> 277

<212> DNA

<213> Psuedomonas fluorescens

<220>
 <221> variation
 <222> (1)...(277)
 <223> n is a, t, c, or g.

<400> 2
 ggnggggng ggncttgtgt ataaatntca ggctctgaca tccaggccgc aggcggcctg 60
 gtcccnatgg ttatcgacca ntccgcccgc ggcnangtg cctatnanat ctactcncgt 120
 ctgtctcaang aacgcgtcat ctttctgggtg ggcccggtaa aagactacat ggccnacctg 180
 atctgtgcgc aactnttgtt ccttgaancc naaaacccgn acnaggatat ccattcttat 240
 atcaacnccc cnggtactag ttcaaccctg gaaaaaa 277

<210> 3
 <211> 819
 <212> DNA
 <213> Psuedomonas fluorescens

<220>
 <221> variation
 <222> (1)...(819)
 <223> n is a, t, c, or g.

<400> 3
 gctngtgtct acgntcagc aanaatgccg cccgcgacna caacncttaa tcngctgaaa 60
 ntccattgga tgatgtcca cccgtccatc cnancctgga agccaggatt nctgcccgcac 120
 atnanggtnc ggggtggcaac aatctcaccg naacctgnnc ctgtgggtcac aancgaggtt 180
 caggtcacca cggncgtccc ggcaccggtt gcccncctgg tcaggccggg ccagggnncg 240
 gtngccccag angtcnatcc tccctttgac cctnaancng acccgcnena tgcntggcna 300
 ccnttgcntt tggcaatgga ccngggngga catnttnccg cccgctatcc agggcncnac 360
 ccaanantac ngccccggcg tccctctann ntntactatt cnaecgctgg gcananntgc 420
 ccctngtngg cttncctttc tcttccccgn cncctntttt tccccnnntt tttttgncgc 480
 gncecncctc cnntcectnc ctteccnnn centcgtctn nnnccctngt gggcctcnc 540
 cttttntcct tcttccnncn tttntctcgc tggccctnct ctctgnttcc ncnngtngc 600
 gtccgggtan cccagcctcg ctctccnccg ctgnngcnet ctentttctt gcttctctt 660
 ccctgtggcc ctntgcgatc ncnanactt ctctcgtctn nggtcncanc cttcngtntc 720
 cgnngngnc gnncnctnc tetngncncn nnntcgtctt cgtnnncnng tntnnnnncn 780
 ncagtcnngt gtngnnagnt tnnagnagtn tgnnatccc 819

<210> 4
 <211> 832
 <212> DNA
 <213> Psuedomonas fluorescens

<220>
 <221> variation
 <222> (1)...(832)
 <223> n is a, t, c, or g.

<400> 4
 gatggatcg gtnactcggc caccgctggg gtgggtgctcg gaacaggttc tcgaagttcc 60
 cgccagtggc cttatcgatg ctgacttcaa ctttgcccgc gtctttgtag acgtcgtctt 120
 ttgggtgcgc gacagtcacg gtgccggtcg tggcgcccgc agcgatgttg atcaccgcgc 180
 cgttgtctag ggtcacagtg acaggcgagc ccgcggcggtt ggtcaaggtt gcggtgtaaa 240
 cgatcgaacc gccttccgca acgctatcgg ttgcaactcaa agtcaggccg gtagtgtcct 300
 gaatgtctgt nanngtgggtg tcngccgggg tggcgctccan gtccaatatt tcataattnc 360

nacntgggg	tcctccannt	tnannctcaa	gttatcgccc	ccccccaaag	gtccttttng	420
cgtnacnaaa	ttcaccgann	ccganctggc	nccnaaccgg	aanggtgang	gtctgggccc	480
ttcnaacang	gttnnataac	caaacggaac	ntcgggtcac	cggtttctnt	taacngaagg	540
nggtgttnna	accncggnc	cnncttccgg	ccaangngng	aaattnnncg	gtggngggaa	600
aanaggtcna	ngttttnaan	gggtttccng	tnancntcnt	nnccccnanc	ggntttnttn	660
ntnanaaacc	aaanntcncc	ngaatttncc	nccnggtngg	ntttttnncg	nannnnngaa	720
nttnnnnggt	gggnnnnccn	ntcctttgtt	tnnaaaatna	nncttttng	ggncnnnnnc	780
naaaagggnc	annngngnc	cnnntgggn	ggnnnccnnn	gggncnaag	nt	832

<210> 5
 <211> 1054
 <212> DNA
 <213> *Psuedomonas fluorescens*

<220>
 <221> variation
 <222> (1)...(1054)
 <223> n is a, t, c, or g.

cncaanggn	cagagcacag	gatatgcngc	aattctcatgg	acaaacggcg	ccagcccnat	60
ggagggccacc	gacnccacat	ccgtcgcgcc	ggtcgcttgc	aggcncgcca	acgcancctc	120
aagggttctgc	gccanttgca	ncnctncctc	gcncaccanc	cnnagttgcc	agcncncaa	180
actccccacc	ncnaannnc	ntnacnaaat	nntgggtttc	cgnataccgc	ccnactcac	240
gcaccaattg	ctcaccncg	gcctgaacna	actggctcgt	ncnctncccg	ccccatccnc	300
tggttnaaac	nggcnattc	cttnaccccc	agcaacancn	aataaccggg	acctggccan	360
cnccgggtng	ctcaccggg	cattaaactg	cattttcaaa	atatnnccgg	ttggccacgc	420
ccgtnagggt	gtcctgntag	gatecnacc	ccantttcnc	tntgcccctn	ggnetgntcn	480
nggaannngn	ccntgagctt	tctcgaccat	ctgggtttct	tnctcntgcn	cccactcncg	540
nnncaagttt	taaggtnntn	nctccgggna	atcctctnng	gcnnannctt	naactgnaaa	600
cttccnccga	acngggncct	aanantagnc	ctatnnnggg	nnacnngcgt	tgnccaaccn	660
aactnttttt	ttttcccagc	cgcggggctn	ttcaagtctt	tgaacgnaac	tcctcnngtc	720
nttccacang	gnetcccccc	tantntntaa	ccgcgtntcn	tctatnttgg	ngtccccgn	780
ntncatacat	gncngagtan	aagaagctcn	ancctccca	nnnggntctc	cgccccccaa	840
ttntccccct	ctctcccttt	nancntctaa	atatattctt	tnntgggnnt	naanaagggg	900
ggcgcanaaa	nacctntctc	cggggggggt	tgtgggncct	nnanaaaccc	ccctttctnt	960
tnnnnncccc	cctccgnggg	ggctccnccc	tccctntttg	ttttccccnc	ctannaatcc	1020
ctactcncng	gnctagttga	aaaaacanna	acgc			1054

<210> 6
 <211> 880
 <212> DNA
 <213> *Psuedomonas fluorescens*

<220>
 <221> variation
 <222> (1)...(880)
 <223> n is a, t, c, or g.

ncnnacgnnt	ngnaagtgat	caggccnatt	aaacnnntga	cnaaannaga	acangnnnggt	60
ctgttactac	tcttcaagac	caacccaagn	cgaccgtgna	tagcgngncc	tnacgcagc	120
atcngttccn	catttagatt	nntatccatc	cntaagtttc	nccgggtcag	aacgntnctt	180
gacgtacaac	ccatanngcg	gggtannggg	nnatttttng	ctacctnca	tgttttgaa	240
gnccnantnc	ccnttaatng	gnagcnnanc	ncangcncnn	ggggattatt	acnactcnac	300

centgganaa	cnttgccact	acngcnggnc	ccccgcnng	tcenggnctc	ccctgcccac	360
ttcccttgtc	ccccgncctc	tntnccccct	tttncgctcn	netttctggtg	tnegnttccc	420
ctccccccng	tcctctttca	ncnctnngcg	tctnngggcac	ctngncgnnc	tcttccctnc	480
tgccccctct	nnccccctt	cgttntancc	cctctctcna	cntncttcat	cccgctccctn	540
ttcttntctt	ccnctnccn	ccctntccta	ntcctntcgt	ccnctnecgn	tctctgctcn	600
cctnncncnc	ttntcgactt	cnnctgttg	nccnccccgc	ngngncttct	ctngtcttct	660
cccgctngcn	gtcaganncc	cntccttccn	ttntnctnn	ctgtccgnen	gcgnnccctgt	720
ncctnecgcc	cctagnnnng	ncgcgcctcn	gcnnccctgt	cccngntnt	nnctcttctg	780
cncgctgctc	nnntttctn	tntcnctcg	cccatccnct	ncctctntnn	nncgtnngtt	840
ccncttctag	gnccnnattc	cnannnngg	ccnttncccc			880

<210> 7

<211> 779

<212> DNA

<213> *Psuedomonas fluorescens*

<220>

<221> variation

<222> (1)...(779)

<223> n is a, t, c, or g.

<400> 7

ncaanncaga	tcctgnaaaa	cgggaaaggt	tcntttcagg	tacgctactt	gtgtataaaa	60
gtcaggggccc	aaacgcccc	ggtgcaacaa	ctggtcnaag	gctacntggc	gggttacaac	120
cgtgcgctgg	tcnaacgcaa	ggccaaaggc	ctgcccnaac	aatgtgccag	cnaatgggta	180
cgggccgatca	cggcgctgga	cctgggtcaag	ttgacccgcc	ggctggtggg	ggaagggggc	240
gtcggccagt	tcgccnangc	cctggccggc	gcgcaaccgc	cccaggcnac	cgcactcgcg	300
ggcaccgccg	tcaccggttt	cgcggccgcc	gcaaccgccg	agcagcnttt	tgccctgaaa	360
cgcggcaaca	atgcnttggg	ccatcgccan	cnaacgctcg	ttcaatgggc	cgttnggaat	420
ntttgcttgg	caaaccccc	atttttcccg	ttgggttagg	cggcattcct	tttctnacca	480
naaagcacct	gaaccattcc	cgggcaanct	tggaaattct	tgggccccng	ngcctgccaa	540
ttttgcnaa	aaatcaanat	cggtttcaac	cancncctt	gcctggaacc	aaaccgtcaa	600
aaactccaaa	aaaattcccc	cttnccnctt	gcaatcnntc	naagaaccaa	cccttttttn	660
ccaaggnatt	ttttttccna	naaacnncaa	angntttnt	naattttacn	acttaaggcc	720
anttnnaaag	tncccaattt	tttanngtcc	aatttgnccc	natttttaaag	gctccgggtt	779

<210> 8

<211> 848

<212> DNA

<213> *Psuedomonas fluorescens*

<220>

<221> variation

<222> (1)...(848)

<223> n is a, t, c, or g.

<400> 8

gccnnnnnc	nattatncaa	gntctaagtg	ttnnaccana	tnccaaggac	ataatgactt	60
ncctttatta	antgtccgga	ccatnccata	tncaaccgtg	canaccgtna	acttnaccca	120
ncatgnctcc	gcntgtcgta	tttatanncc	ccataagctt	cncctgtcag	aacgttncaa	180
taggtacant	natactgcnc	ggcncatggc	attttggtt	tctttatgtt	nggnagttcn	240
aacagccttt	ttatggagcg	tccacagcta	tagggggaaa	ntnctattca	acnctggcna	300
aannttgaaa	aactnaganc	ttcnnnggtn	tataggggta	tcccntgacc	aaannccnct	360
aattccnanc	ctttgntccc	acttcctccc	tngcgcgnct	ttaccnngng	ccccgtccct	420
tccccncngn	ncntnggnca	cngggggaaa	ngnnntcncc	ccgtgggttt	ctcccnctcn	480

tngnnnnncc	tcgtnntcc	cggnnccttn	cccccnngtt	cggaactntt	ctccccnncn	540
ccnecgcgng	tgcgtctnnn	tnccccnngn	tnncnnggnt	tnncnngcnc	ccntttctct	600
cccccccccc	ttanccngga	ncectctccc	tncgcntggc	cngccccccn	ggncctctcc	660
ctntnecctc	ggngnncnc	gnegcnctcc	ttnnenttcg	cctctctcnn	ccntcnctct	720
cnctentncc	ntcccncc	ctcntnnntc	ccccntgccc	nnnnnccegg	ccnttcgntc	780
ctcnnnnnnn	tncttgngcc	cgcgtgcncn	gtngcgnccc	gctntcctgc	ctgtcncccc	840
ccctnccc						848

<210> 9

<211> 533

<212> DNA

<213> *Psuedomonas fluorescens*

<220>

<221> variation

<222> (1)...(533)

<223> n is a, t, c, or g.

<400> 9

tatttggtga	taagntcagc	gccagcagtg	accgatgtca	ccgataccat	cgacaccagc	60
accgtttcgc	tcacagcgac	ttcgacggtg	gccgaagggtg	ggactgtcgt	ttacaccgcc	120
tcggttaacg	cacccggtgac	cgacgctccg	ttggttatca	ccctgttcca	aacggccana	180
ccatcnccat	tccggttggn	gccagcancn	gcaccgtgaa	cttcgtgaca	ccaaacgacg	240
ccctgcgagg	cggcgataac	ctgagcgtga	agattgatga	cgccaagggt	ggcaattacn	300
aaaaactgga	catcgacgcc	accccggcgg	acaccaccgt	taccgatntg	caggacacta	360
ccggcctgac	cttgantgca	accgatagcg	ttgctgaang	cggntcgatc	gtttacaccg	420
caacattgac	caacgcnc	ggntcgctg	tnctgtgnac	cctgaacaac	ngngcggtga	480
tcaacatccc	tgcggnggtt	tcccccccg	tnctantcta	cacgngngaa	aaa	533

<210> 10

<211> 591

<212> DNA

<213> *Psuedomonas fluorescens*

<220>

<221> variation

<222> (1)...(591)

<223> n is a, t, c, or g.

<400> 10

tgattgtgta	taagatcagc	cagcaaggcg	ccgtcgtcgg	gttggtaaag	ccccaccagc	60
aaacttgcca	gggaactctt	gcccagccg	ctgcggccaa	tgatgccnat	tttctcgccc	120
ggcttganca	ccaggttnat	attctacacc	tngggnttct	gctggttcgg	anaaatnaaa	180
nttcaactna	nngnattcca	acggccctt	ccagaacttt	cnggtcangg	ggngctctnc	240
caaattgcgc	tcttggggca	gctccntcat	ctggtcgana	ganatcttgg	tcaccccccc	300
ctggttggtat	cgggtentca	ngcccnacaa	cnaaaccaac	nggctgaggg	cgcgaccgct	360
gaacatntnt	cangcgacca	ncccaccnt	gctcangcna	ccggcgatna	tcaagtntac	420
nccnaaaana	anatgaccac	cccngccagt	tnctggatca	acaaagtgat	gttctttgcc	480
nggccggana	acatcttcac	ccccanttct	aagcggctga	aggtgccgat	agtctgttcc	540
cnctggtatt	ggcgtnccnc	ccccentact	antcaacncn	tggnaaaaaa	a	591

<210> 11

<211> 1249

<212> DNA

<213> *Psuedomonas fluorescens*

<220>
 <221> variation
 <222> (1)...(1249)
 <223> n is a, t, c, or g.

<400> 11

ctgggtgtat	aagatcaggg	ccantngtgt	cctggagtgt	ctgtnacagt	ggtttcggca	60
ngcttgccct	cnaatncaan	tttttcgtaa	ttgccaccct	atggcctnct	ccnaatttga	120
ancacnagnn	acctncccan	tgnaaagggc	ttcttcngcn	tcnngaaatt	cancnncann	180
naaatngggc	caaccctgan	tggttaccgt	cntgccgcnc	ccnctcnggn	catttctctg	240
ccnaagcntc	ccggtnccctn	gnttgccctc	taaccceaagc	gncngntntn	nancnncctt	300
gtttcncccc	tnengnccna	cgggtggaan	ggttttncce	ccntaggggc	ctcnnttntt	360
tctaaancgc	ttttccagaa	aaaggcctgc	cgggtntacn	ccttcttann	tntcgtcgcg	420
tccnagngct	tatcnctctc	tncccccttc	ggatactnct	ctgtaagttt	ccctaaaatc	480
nnctggntng	gnttctnncn	anaaaagaana	tctntggggg	ctttntntnt	tatatcctct	540
cntattgtnc	tttncnntan	cntctntccn	ngannctcat	tcccganacc	ctctnnnnnc	600
cgccttnccn	tctcntatan	tttctnagtt	gaaccgctcn	tcccctnca	ctnttattnn	660
ntnngcgggn	cgcncctttt	gtccctcntt	aaccctgggg	ntngcgagcn	tacnggctcn	720
ctccctaata	ctctgggcgg	tnnnggggcg	nacgtcctcg	ccttcggtcn	naaatnnttc	780
ntaantcca	acntcgngcn	gccccgctcc	ggnnnnnnca	atntntctc	ccccctattc	840
tngtacnca	gcgngtgatn	atcccnttct	cannagcctn	ttcnggggat	aacngngnag	900
ngannctctc	tcttttagtnc	cnaaancnca	tctctnctcc	tcttcttcng	gtcgcgctnc	960
tanancnctg	gtcagttnnn	tectcnatgn	nnennaggnt	cccnnttntc	cnctcncttc	1020
ttgnnnactc	ccngtntgtc	cnggantggg	tcttcgcgct	cggnanennt	gtcctntnt	1080
tcncnanncg	aanantctcc	ttntaacac	nccttcgcen	aanacntttt	nactctnccc	1140
tctccttctn	ctnnctcgtc	tnattntnan	ttncntnctc	anncngtgac	tcgttagcnc	1200
tccgntcttt	ccnantcttc	gccccentct	ccnctcnca	nnctatccc		1249

<210> 12
 <211> 373
 <212> DNA
 <213> *Psuedomonas fluorescens*

<220>
 <221> variation
 <222> (1)...(373)
 <223> n is a, t, c, or g.

<400> 12

tnattgtgta	taagntcagg	actagagntc	ctctcttagt	nacggttcgc	agcgttttgc	60
accgcatcgt	ccantgcgtn	ccccaccccg	tactagtcga	cacgtggana	aactcgccccg	120
gagtcgacnc	gtgggtanta	gtcgaagcgt	ggnganggnt	cncgntatna	ggcntaanan	180
ctgcatcacg	aaagcngggg	gaaggttctc	naaaanttcn	ccnatgaggg	agaacacgga	240
aancccttta	ccncaggggc	ggcccngaaa	tctggcaacn	gancggnngg	agaatcnnc	300
atttcgtcag	ctccatgggc	accaccggga	acatcatggg	cgtcnntntc	cngtactant	360
cgaccgtggc	caa					373

<210> 13
 <211> 683
 <212> DNA
 <213> *Psuedomonas fluorescens*

<220>
 <221> variation
 <222> (1)...(683)

<223> n is a, t, c, or g.

<400> 13

tgactgtgtg	ttataagntc	agncgcacnt	ggnagtcnc	ntntgggttg	tangatccgc	60
ancnattaag	ctggccnngg	gaaantcngg	ttcaaccnng	tgcngncaat	ganncnntat	120
ttcactcncc	cggcgtnac	ncctnngtan	tantcgaccc	ntggncanta	ntantctaca	180
nntgggtcaaa	acntttcgan	nnngtaggng	ncgccctntn	tanangtnan	cttcgtnacg	240
ggggaggaaa	angctccccg	gngggcannn	gccgagccta	aaaaangagg	cangtangggg	300
tgngaaaaaa	naatanctng	atangacncc	accnnttttg	acgccaatta	accgangtac	360
angaccnngn	cnaactcatt	ttnagtgtnc	gcgacagaaa	ttttnanggn	cgcnccangn	420
gaanggnctc	cnanggtttt	gnaaannnaa	acnaggccct	ccnntaaatg	gtggaccgcg	480
ggnaannntt	nnccnngant	gggggttttg	aattactttt	caacaatctt	caaaacntcc	540
gggtcnancc	aggaggggnc	aaaaaaaaaa	tnttttcnng	gtngccnnaa	aaatatccna	600
aattttntcn	cccccccccc	nccnnaaaag	aaggnggggg	gggaagggga	aaaagggggg	660
aangaggggg	gggaaggggg	ggg				683

<210> 14

<211> 672

<212> DNA

<213> *Psuedomonas fluorescens*

<220>

<221> variation

<222> (1)...(672)

<223> n is a, t, c, or g.

<400> 14

gtgcttgtgt	ataagntcag	nccctggcct	gngcgncnac	aactccggtn	nccgtctaca	60
ntttagcnaa	ggatcggtca	ttgcctngtc	tntcggntan	actnccggga	cnatccacct	120
caatactccn	nccattnacg	tctatggtaa	ccngggaggtc	ggtcancagn	ncnattaccg	180
gtntacacng	tggaacttcc	gaaaatctng	tggcnaacac	gggacctgcg	gtccccncca	240
nttccgattc	nggnganacn	ncatggntgt	cncnnaacng	nngcnacncc	attcctgnan	300
gggngccaan	ttccttttnc	ntcaancegt	nggnaacggg	cccnaatncc	gtnaacgtta	360
ccnnnganaa	atggctngtt	ttccattccc	ccgggggnan	aaaccgggac	ngaagatttc	420
aanaccgcg	cntntnattt	taccnngggg	nnngcgggtc	gncccccn	nnacnngtga	480
naangggggg	ctnttcaaan	ttctnngtgt	tnancacnac	cctgggggtt	natantantt	540
ncanaattnc	gggnggaana	ccaccggggc	ttannnnctt	nnaacnggnc	nnncnaccnn	600
ctttccnnnn	ngggggggng	ttccnnccnc	ccccntttn	nttnttttn	aaannttttt	660
gggggaaaaa	aa					672

<210> 15

<211> 1676

<212> DNA

<213> *Psuedomonas fluorescens*

<220>

<221> variation

<222> (1)...(1676)

<223> n is a, t, c, or g.

<400> 15

tgcttgtgta	taagatcagg	gcccgcgcgc	nccnnantta	ngtctgggtc	aacgacacnn	60
catnggtgcn	gtggnanctc	antttacnag	gcncctaaaa	ngcatnattg	ttatncagtn	120
ngncgaggtg	gntcctcccn	tanccgaagn	natntgnnna	cttgggaanga	tttnancntt	180
ttccantcgg	tngntaccag	nngtgantcn	tcantttctg	acaccnctg	gtnnccntcc	240

tggtcaacncc	tanannngac	cncctctctcc	gntgnggggcc	tgngngcntaa	tatnntaccg	300
gctttnnant	gctgtcagta	tnantctcgn	nagcngnaaaa	ntcncctcnc	anncggtgtn	360
tntngtctcn	cncctctcct	ncctntacac	tcactnactn	tntnctgnaa	atcnnctcnn	420
ctgtantatc	acggncancn	cgtctctnct	ggggctcnc	tganaggctc	ccccnacct	480
ctctannnac	ngtgcgggt	atnncnctat	aanagtcttg	tgcagtntc	acagtnacat	540
cgtcgccnnn	cncgngtagc	tctgcacnt	cgcccttttn	tttctnttct	ctcngcaaan	600
atcttntnt	ctctcnnctn	atcattatc	ncangcgng	gggtctcct	ccccctcnn	660
nctcngttc	nanacangtc	ntntttagct	atgtcttatg	tncncctntc	anttttntcn	720
cnccttcncc	nettcagann	ggctnngnet	gacctctata	gtcgtntcnc	tcctccctct	780
nctnntctct	cngcnataac	gcncntncnc	ttctggntc	tcnngctctc	tnntntata	840
tcnncgcn	nttctctcta	tctctccgnt	ntgtgctcnc	caattgtncn	ctctctcgtn	900
cnnctgtcnn	ntctancgtn	ttcttgactt	nannaatacn	tacctctctt	ngcctctctn	960
cntntnctct	cncgcacatc	ctnngaccgc	tncctctgcn	cngcgcnatc	tcttctttnc	1020
gttctccnnt	tctcgcgnet	ctctnngtac	tngettttcc	cncctacctnt	ctcttgctcc	1080
ttctctgcnt	cncctnccctc	tctctctctc	ntctangctn	ncncgncct	nggctttctc	1140
tcgctnctnt	tcnctctctc	ntctntnccg	tctcgtctng	atcnnctctc	catcatntnc	1200
tntntntca	tcangctntn	tgncactctc	cnatctgtnt	ctctntctta	ntntccntc	1260
cttctnttc	tcttanctcn	cgttnatnnc	nttctctgat	ntcctcnagt	atntctatgt	1320
acgctnnct	tnatcgngnn	cctntctcta	tcancatcat	nctagctnnc	ttcttatngt	1380
cctgctctca	ctntttctgc	cnaatatnnc	atcncntctc	tntatcttct	tanattntnt	1440
cctntnaatg	tttnanaatg	ctctactcna	ncctctctnt	tcttnnnctc	cagntcactc	1500
tctananntg	cctnnegtta	tacgntcttn	tnccgtttan	tgcgtntnct	atcantnncg	1560
ctctttntt	ctctctctnc	cngtntcttn	ncacactntc	ttcatctctt	ctcnnatatn	1620
natgtcnnct	tatnncnct	tctatgctnt	cncctntcna	nccacantnt	nttctc	1676

<210> 16

<211> 721

<212> DNA

<213> Psuedomonas fluorescens

<220>

<221> variation

<222> (1)...(721)

<223> n is a, t, c, or g.

<400> 16

tncttgtgta	taagatcagg	cctatngccg	nctgnggntt	ntctgggtgc	ncgacgcgcc	60
attcgaaaaa	ancagctccg	nnacngttc	caantacacn	nngttgtncn	nccgnagttc	120
cagcttcngc	ctcgccnacg	tnnacaatc	ctncaaaacc	ctgggtgtgn	tnttcnnna	180
gctnatgtan	ganngtcnat	nggnetgnnn	gnactgtcnc	accnagnenc	angtnggcac	240
caaccngagc	ntcattcneg	cnnacnnega	accccgngng	natcgcttct	ntccnaacnc	300
cnncaantcc	aacnccatng	gttgtgttgn	cnacgacnng	ngcgaaaacn	ncgncacnn	360
ngnccnagtc	aagttcccg	atacccacag	cnggtcnggg	ggntcncccc	cctntcntgt	420
tcctaaacatn	nccatanaan	nnnnggtntg	ctgggggaat	ccaanccntc	nnctgngggt	480
cgatcnaaac	aanatanggg	tcaanggnnc	gccacttgcn	tnatnaattt	cnnagtgcc	540
cntnctnnc	tgatnngcna	agccnncnnn	gggttggngg	gggnnttnc	ccnnntatna	600
antanaaacg	gcngntccnt	tnncnccan	gggtgnttgn	ngnttttnaa	aacnctttt	660
nnnaaaanan	cccccnct	nttncnng	gannannatc	cnaaaannnn	gttcncccc	720
c						721

<210> 17

<211> 452

<212> DNA

<213> Psuedomonas fluorescens

<220>
 <221> variation
 <222> (1)...(452)
 <223> n is a, t, c, or g.

<400> 17
 atnnngnnnn tncctgtgta taagntcagg gcncncctn tcnnaacttn gtctgggtcg 60
 ngetacacnn cannggnnac tggcagctcg gtnaccgcta cctnanaacg cttcantgtt 120
 cctcagcngg tccacgtcca gccttgagcc acatgtnaaa annngccna caanccnngg 180
 ngtnaanntc cacgnntgc ncgacgantg ccaatnnaan nttctcnacn gtttcacctg 240
 gaangacctt gccganaccn anacnntcac caanggtgaa nncaactccc ggnagatncg 300
 ctncacncn gacccaacg aatcctncgc cgngggtttt nttagcanca tcgncgncan 360
 caaccangnc canttncnc cgntntcatt ccnccnanc gacggnnntt ctgggcgtcn 420
 cccccccgt actantctac ncntnncaaa aa 452

<210> 18
 <211> 442
 <212> DNA
 <213> *Psuedomonas fluorescens*

<220>
 <221> variation
 <222> (1)...(422)
 <223> n is a, t, c, or g.

<400> 18
 tncctgtgta taagntcagg ntctnagatg agctcggtag ttcangagnt tttctgcgac 60
 cgcgnnnccg acgnctgnaa tcgntggcna ggtngccta nacannnnaa agtanncccc 120
 tcgaancgnt cnntgacctc ctgntccaaa tngtcacng cattggncga cgcnnngcna 180
 cccnnaactt cgctcgacnt cccaaaancn gcctgggcn ngcncgncng gattngccc 240
 gacatennct nancaaantr cccnccgcn tactngcca nccttgacca nnttttgnc 300
 tcctntcctt actgggtcng cttegnctcc ggnttgctna ccannatggt ccnaancctg 360
 ctgtcctnca ctctcaaatr cgcggcggc caaccntgct gatcgnttc nncnccnag 420
 tncatttcaa cccctgccca aa 442

<210> 19
 <211> 538
 <212> DNA
 <213> *Psuedomonas fluorescens*

<220>
 <221> variation
 <222> (1)...(538)
 <223> n is a, t, c, or g.

<400> 19
 ctttgttgta taagnatcag aactagagc ttgccccttc tncancnctt cnatggacag 60
 cggctttcgg gccgtcgagc aacgatctgt ccacagttna ncaccannag gcgntccacc 120
 atcaanagaa aggannncng gtnctnacc acnnacacan gtcttggtat cnaccacggc 180
 agccaagcgn tgtttcaaac gttcttcage nggtgtgtcc atggatctgg ttggttcgtc 240
 caanaacaag ataggcgtgt tnancncnt ncnactngac acgtggaaat tntngctcta 300
 accncccgac angttctgtc nncnctncc naatnnnaat tcataacctt ncngatgccn 360
 gcgggcaaat teatncncnc ccgccanttc acggnctgga acacanttca actncnacgt 420
 ttenggcgcc naaaantctt gttgtcnccc aggnntttnn nancancnng atntnttgg 480
 ggnnccttnc cnaantntt nnnncnctcc cntnannttg aanntngnng gatgttna 538

<210> 20
 <211> 218
 <212> DNA
 <213> *Psuedomonas fluorescens*

<220>
 <221> variation
 <222> (1)...(218)
 <223> n is a, t, c, or g.

<400> 20
 tnattttgtgt ataagttcag gttgctngnt gnaagccatc ccggccaagg gttgccggcg 60
 tcaccacat ngtactagtc nncgcgtggc cnaaacgggt angctcnccta attgatgctt 120
 gccaacgntt naaaaaaaaaag tatngacagg gtnttaacca tcagntntn ccnaaangta 180
 ctagtctacc cgtggccana naantnnann nntggnc 218

<210> 21
 <211> 642
 <212> DNA
 <213> *Psuedomonas fluorescens*

<220>
 <221> variation
 <222> (1)...(642)
 <223> n is a, t, c, or g.

<400> 21
 tnctttgtgt ataagntcag gccccggggt ancgncagta ngntgncga ncggtcctg 60
 caagctgncg gcgnanattc ngcgctncct cttntgcnt ctgaaatgca ttnccectcn 120
 atgagtcggc tgtcttcang gttnggntgg ttncacatc catcancttg ntctcncctg 180
 ttaccccngc ngtnncctgc cgccctctca gaccnggatn ccgtnanc accccctagt 240
 tctaanaacg taccangan aangaacacc cgctcgcggtg tgggcctact tcacctatcc 300
 tgccccggctg acgcccgttg atacaccaag gaaagtctac acnaaccctt tggcaaaatc 360
 ctgtntatcg tgcgaaaaan gatggatata ccgaaaaaat cgctatantg acccncantc 420
 anggtntttg caacggaaaa ncnctncttc cctgctgttt tgtggaatat ctaccgactg 480
 ganacaggcc aatgcatgaa attactgaac tgaagggaca agcaaaaaac catccaanna 540
 actncaccaa cnanctggcc gagtnggttt naatccccgc gccggccaaa aaacgccngc 600
 attaannaan gcnggttggt tctntnctc gnnnaaanaa aa 642

<210> 22
 <211> 583
 <212> DNA
 <213> *Psuedomonas fluorescens*

<220>
 <221> variation
 <222> (1)...(583)
 <223> n is a, t, c, or g.

<400> 22
 tattgtgtat aagatcagnc cagcngtggt cntacagntg ggacaggcgg cgctcgcaagc 60
 tccccctcga gtgntgntcc agnnatancg agncntgngt gttataaaca aancacggnn 120
 atcgtataac nccgttcgtg acgncgtatc gccanatctn naatnccgna aacgggtnga 180
 aatccgtaat ccaagtgtta tcntgcncgg gatgttctag agcaactcca tcatctntac 240
 aancttggtc gancttggtc tggcacctcc actgagacaa cgggtgtnctc aatagtcanc 300

acnccccctnn	ccccnnggga	gganatntnt	cncctggnncc	acnncnancan	catctttaac	360
gnatattttct	tntttatcag	cccnnttggt	taccnntgc	gtcattgggt	ggntgcagcg	420
acaacncccg	gagaaancna	tttncctggg	nggctcntcn	atcatcngca	ccncccccca	480
aattganaag	gtcgccccnc	nccnngagan	acnntanccc	angtcggccn	tcnncangtg	540
cgtggcggtcc	ccnccccgtn	ctantcnacc	cttnccagnc	caa		583

<210> 23
 <211> 360
 <212> DNA
 <213> *Psuedomonas fluorescens*

<220>
 <221> variation
 <222> (1)...(360)
 <223> n is a, t, c, or g.

<400> 23	
tctttaanta	gnaccgacga ntctctctan caccocctaac cagtcnacgg ctngtgggcga 60
ctggatatng	acactngacc aggtcggggc ntccccccac nnnntnctatt caacgcttgg 120
ccaaacacgt	ggtcanatct ctcnccagtg ccctctntan cnttctccga tacacttntc 180
ttctttcaat	atcccccgct aatccccctct catcngtgaa nnggccccgc tccattaaaaa 240
agcatngngc	nnacaaacaa ccngagatcn ttcnnttnnn canncctccc gntccctcaa 300
atttcgnnag	gggnccggtt gcgaccnaa accgcntccn ngnggnaaat ttcttntntt 360

<210> 24
 <211> 494
 <212> DNA
 <213> *Psuedomonas fluorescens*

<220>
 <221> variation
 <222> (1)...(494)
 <223> n is a, t, c, or g.

<400> 24		
tncttggtgta	taagntcagg cgcaggcgng accgcactan ctatgtgang ngctctcngt 60	
cggngnnnca	ggcnatgccc gtcattgtcc atntgcngac naccctacta ctcttntgcn 120	
tgancatgac	tgccgggccc anaagttgcg cattgtcacc taaccctggg cgctgtatg 180	
tctncnaaaa	naactgcaag atgctgggcc tggactacna aaccacggcc atcgtgttca 240	
agencctggg	tntcgacgtg gaatggcagt tcctgccgtg gaancgctgc ctggtgatgc 300	
tggancaggg	gttggcgtac cgnnccccngt acnnttnnac ccntgnnnaa ancnatnccn 360	
tgcngcttta	ccccnnnaa ncncntntcng acntggaatt tgtgatnttc tacnccnatg 420	
ccnggccccca	tcnttttcgc ncnncnata anctgggngn ccccncccc gtnntantcn 480	
accntgggna	anaa	494

<210> 25
 <211> 23
 <212> DNA
 <213> *Escherichia coli*

<400> 25		23
gaacgttacc	atgtaggag gtc	

<210> 26
 <211> 35

<212> DNA
 <213> Artificial Sequence

 <220>
 <221> variation
 <222> (1)...(35)
 <223> n is a, t, c, or g.

 <223> Random sequence

 <400> 26
 ggccacgcgt cgactagtac nnnnnnnnnn gatat 35

 <210> 27
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Random sequence

 <400> 27
 ggccacgcgt cgactagtac 20

 <210> 28
 <211> 24
 <212> DNA
 <213> Escherichia coli

 <400> 28
 cgggaaaggt tccgttcagg acgc 24

 <210> 29
 <211> 35
 <212> DNA
 <213> Escherichia coli

 <220>
 <221> variation
 <222> (1)...(35)
 <223> n is a, t, c, or g.

 <400> 29
 ggccacgcgt cgactagtac nnnnnnnnnn acgcc 35

 <210> 30
 <211> 17
 <212> DNA
 <213> Escherichia coli

 <400> 30
 caggctctcc cgtggag 17

 <210> 31
 <211> 17

<212> DNA

<213> Escherichia coli

<400> 31

ctgcctccca gagcctg

17

<210> 32

<211> 23

<212> DNA

<213> Escherichia coli

<400> 32

gcttccttta gcagcccttg cgc

23

<210> 33

<211> 24

<212> DNA

<213> Escherichia coli

<400> 33

cttccatgtg acctcctaac atgg

24

<210> 34

<211> 595

<212> PRT

<213> Escherichia coli

<400> 34

Met	Ala	Gln	Val	Ile	Asn	Thr	Asn	Ser	Leu	Ser	Leu	Ile	Thr	Gln	Asn
1				5					10					15	
Asn	Ile	Asn	Lys	Asn	Gln	Ser	Ala	Leu	Ser	Ser	Ser	Ile	Glu	Arg	Leu
			20					25					30		
Ser	Ser	Gly	Leu	Arg	Ile	Asn	Ser	Ala	Lys	Asp	Asp	Ala	Ala	Gly	Gln
		35				40						45			
Ala	Ile	Ala	Asn	Arg	Phe	Thr	Ser	Asn	Ile	Lys	Gly	Leu	Thr	Gln	Ala
	50					55					60				
Ala	Arg	Asn	Ala	Asn	Asp	Gly	Ile	Ser	Val	Ala	Gln	Thr	Thr	Glu	Gly
65				70					75					80	
Ala	Leu	Ser	Glu	Ile	Asn	Asn	Asn	Leu	Gln	Arg	Ile	Arg	Glu	Leu	Thr
			85					90					95		
Val	Gln	Ala	Ser	Thr	Gly	Thr	Asn	Ser	Asp	Ser	Asp	Leu	Asp	Ser	Ile
		100						105				110			
Gln	Asp	Glu	Ile	Lys	Ser	Arg	Leu	Asp	Glu	Ile	Asp	Arg	Val	Ser	Gly
		115				120					125				
Gln	Thr	Gln	Phe	Asn	Gly	Val	Asn	Val	Leu	Ala	Lys	Asp	Gly	Ser	Met
	130				135					140					
Lys	Ile	Gln	Val	Gly	Ala	Asn	Asp	Gly	Gln	Thr	Ile	Thr	Ile	Asp	Leu
145				150					155					160	
Lys	Lys	Ile	Asp	Ser	Asp	Thr	Leu	Gly	Leu	Asn	Gly	Phe	Asn	Val	Asn
			165					170					175		
Gly	Ser	Gly	Thr	Ile	Ala	Asn	Lys	Ala	Ala	Thr	Ile	Ser	Asp	Leu	Thr
		180					185					190			
Ala	Ala	Lys	Met	Asp	Ala	Ala	Thr	Asn	Thr	Ile	Thr	Thr	Thr	Asn	Asn
		195				200						205			
Ala	Leu	Thr	Ala	Ser	Lys	Ala	Leu	Asp	Gln	Leu	Lys	Asp	Gly	Asp	Thr

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      210              215              220
Val Thr Ile Lys Ala Asp Ala Ala Gln Thr Ala Thr Val Tyr Thr Tyr
225              230              235              240
Asn Ala Ser Ala Gly Asn Phe Ser Phe Ser Asn Val Ser Asn Asn Thr
      245              250              255
Ser Ala Lys Ala Gly Asp Val Ala Ala Ser Leu Leu Pro Pro Ala Gly
      260              265              270
Gln Thr Ala Ser Gly Val Tyr Lys Ala Ala Ser Gly Glu Val Asn Phe
      275              280              285
Asp Val Asp Ala Asn Gly Lys Ile Thr Ile Gly Gly Gln Glu Ala Tyr
      290              295              300
Leu Thr Ser Asp Gly Asn Leu Thr Thr Asn Asp Ala Gly Gly Ala Thr
305              310              315              320
Ala Ala Thr Leu Asp Gly Leu Phe Lys Lys Ala Gly Asp Gly Gln Ser
      325              330              335
Ile Gly Phe Asn Lys Thr Ala Ser Val Thr Met Gly Gly Thr Thr Tyr
      340              345              350
Asn Phe Lys Thr Gly Ala Asp Ala Gly Ala Ala Thr Ala Asn Ala Gly
      355              360              365
Val Ser Phe Thr Asp Thr Ala Ser Lys Glu Thr Val Leu Asn Lys Val
      370              375              380
Ala Thr Ala Lys Gln Gly Thr Ala Val Ala Ala Asn Gly Asp Thr Ser
385              390              395              400
Ala Thr Ile Thr Tyr Lys Ser Gly Val Gln Thr Tyr Gln Ala Val Phe
      405              410              415
Ala Ala Gly Asp Gly Thr Ala Ser Ala Lys Tyr Ala Asp Asn Thr Asp
      420              425              430
Val Ser Asn Ala Thr Ala Thr Tyr Thr Asp Ala Asp Gly Glu Met Thr
      435              440              445
Thr Ile Gly Ser Tyr Thr Thr Lys Tyr Ser Ile Asp Ala Asn Asn Gly
      450              455              460
Lys Val Thr Val Asp Ser Gly Thr Gly Ser Gly Lys Tyr Ala Pro Lys
465              470              475              480
Val Gly Ala Glu Val Tyr Val Ser Ala Asn Gly Thr Leu Thr Thr Asp
      485              490              495
Ala Thr Ser Glu Gly Thr Val Thr Lys Asp Pro Leu Lys Ala Leu Asp
      500              505              510
Glu Ala Ile Ser Ser Ile Asp Lys Phe Arg Ser Ser Leu Gly Ala Ile
      515              520              525
Gln Asn Arg Leu Asp Ser Ala Val Thr Asn Leu Asn Asn Thr Thr Thr
      530              535              540
Asn Leu Ser Glu Ala Gln Ser Arg Ile Gln Asp Ala Asp Tyr Ala Thr
545              550              555              560
Glu Val Ser Asn Met Ser Lys Ala Gln Ile Ile Gln Gln Ala Gly Asn
      565              570              575
Ser Val Leu Ala Lys Ala Asn Gln Val Pro Gln Gln Val Leu Ser Leu
      580              585              590
Leu Gln Gly
      595

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<210> 35

<211> 119

<212> PRT

<213> Escherichia coli

<400> 35
 Met Gly Ile Met His Thr Ser Glu Leu Leu Lys His Ile Tyr Asp Ile
 1 5 10 15
 Asn Leu Ser Tyr Leu Leu Leu Ala Gln Arg Leu Ile Val Gln Asp Lys
 20 25 30
 Ala Ser Ala Met Phe Arg Leu Gly Ile Asn Glu Glu Met Ala Thr Thr
 35 40 45
 Leu Ala Ala Leu Thr Leu Pro Gln Met Val Lys Leu Ala Glu Thr Asn
 50 55 60
 Gln Leu Val Cys His Phe Arg Phe Asp Ser His Gln Thr Ile Thr Gln
 65 70 75 80
 Leu Thr Gln Asp Ser Arg Val Asp Asp Leu Gln Gln Ile His Thr Gly
 85 90 95
 Ile Met Leu Ser Thr Arg Leu Leu Asn Asp Val Asn Gln Pro Glu Glu
 100 105 110
 Ala Leu Arg Lys Lys Arg Ala
 115

<210> 36
 <211> 295
 <212> PRT
 <213> Escherichia coli

<400> 36
 Met Leu Ile Leu Leu Gly Tyr Leu Val Val Leu Gly Thr Val Phe Gly
 1 5 10 15
 Gly Tyr Leu Met Thr Gly Gly Ser Leu Gly Ala Leu Tyr Gln Pro Ala
 20 25 30
 Glu Leu Val Ile Ile Ala Gly Ala Gly Ile Gly Ser Phe Ile Val Gly
 35 40 45
 Asn Asn Gly Lys Ala Ile Lys Gly Thr Leu Lys Ala Leu Pro Leu Leu
 50 55 60
 Phe Arg Arg Ser Lys Tyr Thr Lys Ala Met Tyr Met Asp Leu Leu Ala
 65 70 75 80
 Leu Leu Tyr Arg Leu Met Ala Lys Ser Arg Gln Met Gly Met Phe Ser
 85 90 95
 Leu Glu Arg Asp Ile Glu Asn Pro Arg Glu Ser Glu Ile Phe Ala Ser
 100 105 110
 Tyr Pro Arg Ile Leu Ala Asp Ser Val Met Leu Asp Phe Ile Val Asp
 115 120 125
 Tyr Leu Arg Leu Ile Ile Ser Gly His Met Asn Thr Phe Glu Ile Glu
 130 135 140
 Ala Leu Met Asp Glu Glu Ile Glu Thr His Glu Ser Glu Ala Glu Val
 145 150 155 160
 Pro Ala Asn Ser Leu Ala Leu Val Gly Asp Ser Leu Pro Ala Phe Gly
 165 170 175
 Ile Val Ala Ala Val Met Gly Val Val His Ala Leu Gly Ser Ala Asp
 180 185 190
 Arg Pro Ala Ala Glu Leu Gly Ala Leu Ile Ala His Ala Met Val Gly
 195 200 205
 Thr Phe Leu Gly Ile Leu Leu Ala Tyr Gly Phe Ile Ser Pro Leu Ala
 210 215 220
 Thr Val Leu Arg Gln Lys Ser Ala Glu Thr Ser Lys Met Met Gln Cys
 225 230 235 240
 Val Lys Val Thr Leu Leu Ser Asn Leu Asn Gly Tyr Ala Pro Pro Ile

				245					250				255				
Ala	Val	Glu	Phe	Gly	Arg	Lys	Thr	Leu	Tyr	Ser	Ser	Glu	Arg	Pro	Ser		
			260					265					270				
Phe	Ile	Glu	Leu	Glu	Glu	His	Val	Arg	Ala	Val	Lys	Asn	Pro	Gln	Gln		
		275					280					285					
Gln	Thr	Thr	Thr	Glu	Glu	Ala											
	290					295											

<210> 37
 <211> 308
 <212> PRT
 <213> Escherichia coli

<400> 37

Met	Lys	Asn	Gln	Ala	His	Pro	Ile	Ile	Val	Val	Lys	Arg	Arg	Lys	Ala		
1				5					10					15			
Lys	Ser	His	Gly	Ala	Ala	His	Gly	Ser	Trp	Lys	Ile	Ala	Tyr	Ala	Asp		
			20					25					30				
Phe	Met	Thr	Ala	Met	Met	Ala	Phe	Phe	Leu	Val	Met	Trp	Leu	Ile	Ser		
		35					40					45					
Ile	Ser	Ser	Pro	Lys	Glu	Leu	Ile	Gln	Ile	Ala	Glu	Tyr	Phe	Arg	Thr		
	50					55					60						
Pro	Leu	Ala	Thr	Ala	Val	Thr	Gly	Gly	Asp	Arg	Ile	Ser	Asn	Ser	Glu		
65					70					75					80		
Ser	Pro	Ile	Pro	Gly	Gly	Gly	Asp	Asp	Tyr	Thr	Gln	Ser	Gln	Gly	Glu		
				85					90					95			
Val	Asn	Lys	Gln	Pro	Asn	Ile	Glu	Glu	Leu	Lys	Lys	Arg	Met	Glu	Gln		
			100					105					110				
Ser	Arg	Leu	Arg	Lys	Leu	Arg	Gly	Asp	Leu	Asp	Gln	Leu	Ile	Glu	Ser		
		115					120					125					
Asp	Pro	Lys	Leu	Arg	Ala	Leu	Arg	Pro	His	Leu	Lys	Ile	Asp	Leu	Val		
	130					135					140						
Gln	Glu	Gly	Leu	Arg	Ile	Gln	Ile	Ile	Asp	Ser	Gln	Asn	Arg	Pro	Met		
145					150					155					160		
Phe	Arg	Thr	Gly	Ser	Ala	Asp	Val	Glu	Pro	Tyr	Met	Arg	Asp	Ile	Leu		
			165						170					175			
Arg	Ala	Ile	Ala	Pro	Val	Leu	Asn	Gly	Ile	Pro	Asn	Arg	Ile	Ser	Leu		
			180					185					190				
Ser	Gly	His	Thr	Asp	Asp	Phe	Pro	Tyr	Ala	Ser	Gly	Glu	Lys	Gly	Tyr		
		195					200					205					
Ser	Asn	Trp	Glu	Leu	Ser	Ala	Asp	Arg	Ala	Asn	Ala	Ser	Arg	Arg	Glu		
	210					215					220						
Leu	Met	Val	Gly	Gly	Leu	Asp	Ser	Gly	Lys	Val	Leu	Arg	Val	Val	Gly		
225					230					235					240		
Met	Ala	Ala	Thr	Met	Arg	Leu	Ser	Asp	Arg	Gly	Pro	Asp	Asp	Ala	Val		
			245						250					255			
Asn	Arg	Arg	Ile	Ser	Leu	Leu	Val	Leu	Asn	Lys	Gln	Ala	Glu	Gln	Ala		
			260					265					270				
Ile	Leu	His	Glu	Asn	Ala	Glu	Ser	Gln	Asn	Glu	Pro	Val	Ser	Ala	Leu		
		275					280					285					
Glu	Lys	Pro	Glu	Val	Ala	Pro	Gln	Val	Ser	Val	Pro	Thr	Met	Pro	Ser		
	290					295					300						
Ala	Glu	Pro	Arg														
305																	

<210> 38
 <211> 245
 <212> PRT
 <213> Escherichia coli

<400> 38
 Met Arg Arg Leu Leu Ser Val Ala Pro Val Leu Leu Trp Leu Ile Thr
 1 5 10 15
 Pro Leu Ala Phe Ala Gln Leu Pro Gly Ile Thr Ser Gln Pro Leu Pro
 20 25 30
 Gly Gly Gly Gln Ser Trp Ser Leu Pro Val Gln Thr Leu Val Phe Ile
 35 40 45
 Thr Ser Leu Thr Phe Ile Pro Ala Ile Leu Leu Met Met Thr Ser Phe
 50 55 60
 Thr Arg Ile Ile Ile Val Phe Gly Leu Leu Arg Asn Ala Leu Gly Thr
 65 70 75 80
 Pro Ser Ala Pro Pro Asn Gln Val Leu Leu Gly Leu Ala Leu Phe Leu
 85 90 95
 Thr Phe Phe Ile Met Ser Pro Val Ile Asp Lys Ile Tyr Val Asp Ala
 100 105 110
 Tyr Gln Pro Phe Ser Glu Glu Lys Ile Ser Met Gln Glu Ala Leu Glu
 115 120 125
 Lys Gly Ala Gln Pro Leu Arg Glu Phe Met Leu Arg Gln Thr Arg Glu
 130 135 140
 Ala Asp Leu Gly Leu Phe Ala Arg Leu Ala Asn Thr Gly Pro Leu Gln
 145 150 155 160
 Gly Pro Glu Ala Val Pro Met Arg Ile Leu Leu Pro Ala Tyr Val Thr
 165 170 175
 Ser Glu Leu Lys Thr Ala Phe Gln Ile Gly Phe Thr Ile Phe Ile Pro
 180 185 190
 Phe Leu Ile Ile Asp Leu Val Ile Ala Ser Val Leu Met Ala Leu Gly
 195 200 205
 Met Met Met Val Pro Pro Ala Thr Ile Ala Leu Pro Phe Lys Leu Met
 210 215 220
 Leu Phe Val Leu Val Asp Gly Trp Gln Leu Leu Val Gly Ser Leu Ala
 225 230 235 240
 Gln Ser Phe Tyr Ser
 245

<210> 39
 <211> 375
 <212> PRT
 <213> Escherichia coli

<400> 39
 Met Ile Arg Leu Ala Pro Leu Ile Thr Ala Asp Val Asp Thr Thr Thr
 1 5 10 15
 Leu Pro Gly Gly Lys Ala Ser Asp Ala Ala Gln Asp Phe Leu Ala Leu
 20 25 30
 Leu Ser Glu Ala Leu Ala Gly Glu Thr Thr Thr Asp Lys Ala Ala Pro
 35 40 45
 Gln Leu Leu Val Ala Thr Asp Lys Pro Thr Thr Lys Gly Glu Pro Leu
 50 55 60
 Ile Ser Asp Ile Val Ser Asp Ala Gln Gln Ala Asn Leu Leu Ile Pro
 65 70 75 80

```

Val Asp Glu Thr Pro Pro Val Ile Asn Asp Glu Gln Ser Thr Ser Thr
      85                      90                      95
Pro Leu Thr Thr Ala Gln Thr Met Ala Leu Ala Ala Val Ala Asp Lys
      100                      105                      110
Asn Thr Thr Lys Asp Glu Lys Ala Asp Asp Leu Asn Glu Asp Val Thr
      115                      120                      125
Ala Ser Leu Ser Ala Leu Phe Ala Met Leu Pro Gly Phe Asp Asn Thr
      130                      135                      140
Pro Lys Val Thr Asp Ala Pro Ser Thr Val Leu Pro Thr Glu Lys Pro
145                      150                      155                      160
Thr Leu Phe Thr Lys Leu Thr Ser Glu Gln Leu Thr Thr Ala Gln Pro
      165                      170                      175
Asp Asp Ala Pro Gly Thr Pro Ala Gln Pro Leu Thr Pro Leu Val Ala
      180                      185                      190
Glu Ala Gln Ser Lys Ala Glu Val Ile Ser Thr Pro Ser Pro Val Thr
      195                      200                      205
Ala Ala Ala Ser Pro Leu Ile Thr Pro His Gln Thr Gln Pro Leu Pro
210                      215                      220
Thr Val Ala Ala Pro Val Leu Ser Ala Pro Leu Gly Ser His Glu Trp
225                      230                      235                      240
Gln Gln Ser Leu Ser Gln His Ile Ser Leu Phe Thr Arg Gln Gly Gln
      245                      250                      255
Gln Ser Ala Glu Leu Arg Leu His Pro Gln Asp Leu Gly Glu Val Gln
      260                      265                      270
Ile Ser Leu Lys Val Asp Asp Asn Gln Ala Gln Ile Gln Met Val Ser
      275                      280                      285
Pro His Gln His Val Arg Ala Ala Leu Glu Ala Ala Leu Pro Val Leu
290                      295                      300
Arg Thr Gln Leu Ala Glu Ser Gly Ile Gln Leu Gly Gln Ser Asn Ile
305                      310                      315                      320
Ser Gly Glu Ser Phe Ser Gly Gln Gln Gln Ala Ala Ser Gln Gln Gln
      325                      330                      335
Gln Ser Gln Arg Thr Ala Asn His Glu Pro Leu Ala Gly Glu Asp Asp
      340                      345                      350
Asp Thr Leu Pro Val Pro Val Ser Leu Gln Gly Arg Val Thr Gly Asn
355                      360                      365
Ser Gly Val Asp Ile Phe Ala
370                      375

```

<210> 40

<211> 547

<212> PRT

<213> Escherichia coli

<400> 40

```

Met Ser Ser Leu Ile Asn Asn Ala Met Ser Gly Leu Asn Ala Ala Gln
 1                      5                      10                      15
Ala Ala Leu Asn Thr Ala Ser Asn Asn Ile Ser Ser Tyr Asn Val Ala
      20                      25                      30
Gly Tyr Thr Arg Gln Thr Thr Ile Met Ala Gln Ala Asn Ser Thr Leu
      35                      40                      45
Gly Ala Gly Gly Trp Val Gly Asn Gly Val Tyr Val Ser Gly Val Gln
50                      55                      60
Arg Glu Tyr Asp Ala Phe Ile Thr Asn Gln Leu Arg Ala Ala Gln Thr
65                      70                      75                      80

```

Gln Ser Ser Gly Leu Thr Ala Arg Tyr Glu Gln Met Ser Lys Ile Asp
 85 90 95
 Asn Met Leu Ser Thr Ser Thr Ser Ser Leu Ala Thr Gln Met Gln Asp
 100 105 110
 Phe Phe Thr Ser Leu Gln Thr Leu Val Ser Asn Ala Glu Asp Pro Ala
 115 120 125
 Ala Arg Gln Ala Leu Ile Gly Lys Ser Glu Gly Leu Val Asn Gln Phe
 130 135 140
 Lys Thr Thr Asp Gln Tyr Leu Arg Asp Gln Asp Lys Gln Val Asn Ile
 145 150 155 160
 Ala Ile Gly Ala Ser Val Asp Gln Ile Asn Asn Tyr Ala Lys Gln Ile
 165 170 175
 Ala Ser Leu Asn Asp Gln Ile Ser Arg Leu Thr Gly Val Gly Ala Gly
 180 185 190
 Ala Ser Pro Asn Asn Leu Leu Asp Gln Arg Asp Gln Leu Val Ser Glu
 195 200 205
 Leu Asn Gln Ile Val Gly Val Glu Val Ser Val Gln Asp Gly Gly Thr
 210 215 220
 Tyr Asn Ile Thr Met Ala Asn Gly Tyr Ser Leu Val Gln Gly Ser Thr
 225 230 235 240
 Ala Arg Gln Leu Ala Ala Val Pro Ser Ser Ala Asp Pro Ser Arg Thr
 245 250 255
 Thr Val Ala Tyr Val Asp Gly Thr Ala Gly Asn Ile Glu Ile Pro Glu
 260 265 270
 Lys Leu Leu Asn Thr Gly Ser Leu Gly Gly Ile Leu Thr Phe Arg Ser
 275 280 285
 Gln Asp Leu Asp Gln Thr Arg Asn Thr Leu Gly Gln Leu Ala Leu Ala
 290 295 300
 Phe Ala Glu Ala Phe Asn Thr Gln His Lys Ala Gly Phe Asp Ala Asn
 305 310 315 320
 Gly Asp Ala Gly Glu Asp Phe Phe Ala Ile Gly Lys Pro Ala Val Leu
 325 330 335
 Gln Asn Thr Lys Asn Lys Gly Asp Val Ala Ile Gly Ala Thr Val Thr
 340 345 350
 Asp Ala Ser Ala Val Leu Ala Thr Asp Tyr Lys Ile Ser Phe Asp Asn
 355 360 365
 Asn Gln Trp Gln Val Thr Arg Leu Ala Ser Asn Thr Thr Phe Thr Val
 370 375 380
 Thr Pro Asp Ala Asn Gly Lys Val Ala Phe Asp Gly Leu Glu Leu Thr
 385 390 395 400
 Phe Thr Gly Thr Pro Ala Val Asn Asp Ser Phe Thr Leu Lys Pro Val
 405 410 415
 Ser Asp Ala Ile Val Asn Met Asp Val Leu Ile Thr Asp Glu Ala Lys
 420 425 430
 Ile Ala Met Ala Ser Glu Glu Asp Ala Gly Asp Ser Asp Asn Arg Asn
 435 440 445
 Gly Gln Ala Leu Leu Asp Leu Gln Ser Asn Ser Lys Thr Val Gly Gly
 450 455 460
 Ala Lys Ser Phe Asn Asp Ala Tyr Ala Ser Leu Val Ser Asp Ile Gly
 465 470 475 480
 Asn Lys Thr Ala Thr Leu Lys Thr Ser Ser Ala Thr Gln Gly Asn Val
 485 490 495
 Val Thr Gln Leu Ser Asn Gln Gln Gln Ser Ile Ser Gly Val Asn Leu
 500 505 510
 Asp Glu Glu Tyr Gly Asn Leu Gln Arg Phe Gln Gln Tyr Tyr Leu Ala

```
<210> 41
<211> 566
<212> PRT
<213> Psuedomonas aeruginosa
```

20

```

          340          345          350
Ala Glu Asp Pro Val Glu Ile Asn Leu Glu Gly Ile Asn Gln Val Asn
          355          360          365
Val Asn Pro Arg Gln Gly Met Asp Phe Ser Gln Ala Leu Arg Ala Phe
          370          375          380
Leu Arg Gln Asp Pro Asp Val Ile Met Val Gly Glu Ile Arg Asp Leu
385          390          395          400
Glu Thr Ala Glu Ile Ala Ile Lys Ala Ala Gln Thr Gly His Met Val
          405          410          415
Met Ser Thr Leu His Thr Asn Ser Ala Ala Glu Thr Leu Thr Arg Leu
          420          425          430
Leu Asn Met Gly Val Pro Ala Phe Asn Leu Ala Thr Ser Val Asn Leu
          435          440          445
Ile Ile Ala Gln Arg Leu Ala Arg Lys Leu Cys Ser His Cys Lys Lys
          450          455          460
Glu His Asp Val Pro Lys Glu Thr Leu Leu His Glu Gly Phe Pro Glu
465          470          475          480
Glu Leu Ile Gly Thr Phe Lys Leu Tyr Ser Pro Val Gly Cys Asp His
          485          490          495
Cys Lys Asn Gly Tyr Lys Gly Arg Val Gly Ile Tyr Glu Val Val Lys
          500          505          510
Asn Thr Pro Ala Leu Gln Arg Ile Ile Met Glu Glu Gly Asn Ser Ile
          515          520          525
Glu Ile Ala Glu Gln Ala Arg Lys Glu Gly Phe Asn Asp Leu Arg Thr
          530          535          540
Ser Gly Leu Leu Lys Ala Met Gln Gly Ile Thr Ser Leu Glu Glu Val
545          550          555          560
Asn Arg Val Thr Lys Asp
          565

```

<210> 42

<211> 406

<212> PRT

<213> *Psuedomonas aeruginosa*

<400> 42

```

Met Ala Asp Lys Ala Leu Lys Thr Ser Val Phe Ile Trp Glu Gly Thr
1          5          10          15
Asp Lys Lys Gly Ala Lys Val Lys Gly Glu Leu Thr Gly Gln Asn Pro
          20          25          30
Met Leu Val Lys Ala His Leu Arg Lys Gln Gly Ile Asn Pro Leu Lys
          35          40          45
Val Arg Lys Lys Gly Ile Ser Leu Leu Gly Ala Gly Lys Lys Val Lys
          50          55          60
Pro Met Asp Ile Ala Leu Phe Thr Arg Gln Met Ala Thr Met Met Gly
65          70          75          80
Ala Gly Val Pro Leu Leu Gln Ser Phe Asp Ile Ile Gly Glu Gly Phe
          85          90          95
Asp Asn Pro Asn Met Arg Lys Leu Val Asp Glu Ile Lys Gln Glu Val
          100          105          110
Ser Ser Gly Asn Ser Leu Ala Asn Ser Leu Arg Lys Lys Pro Gln Tyr
          115          120          125
Phe Asp Glu Leu Tyr Cys Asn Leu Val Asp Ala Gly Glu Gln Ser Gly
130          135          140
Ala Leu Glu Asn Leu Leu Asp Arg Val Ala Thr Tyr Lys Glu Lys Thr

```

```
<210> 43
<211> 290
<212> PRT
<213> Psuedomonas aeruginosa
```

22

```

      115              120              125
Thr Trp Gln Ala Gly Ala Met Leu Leu Leu Thr Trp Gly Leu Leu Ala
      130              135              140
Met Ser Leu Ile Asp Ala Asp His Gln Leu Leu Pro Asp Val Leu Val
145              150              155              160
Leu Pro Leu Leu Trp Leu Gly Leu Ile Ala Asn His Phe Gly Leu Phe
      165              170              175
Ala Ser Leu Asp Asp Ala Leu Phe Gly Ala Val Phe Gly Tyr Leu Ser
      180              185              190
Leu Trp Ser Val Phe Trp Leu Phe Lys Leu Val Thr Gly Lys Glu Gly
      195              200              205
Met Gly Tyr Gly Asp Phe Lys Leu Leu Ala Met Leu Gly Ala Trp Gly
      210              215              220
Gly Trp Gln Ile Leu Pro Leu Thr Ile Leu Leu Ser Ser Leu Val Gly
225              230              235              240
Ala Ile Leu Gly Val Ile Met Leu Arg Leu Arg Asn Ala Glu Ser Gly
      245              250              255
Thr Pro Ile Pro Phe Gly Pro Tyr Leu Ala Ile Ala Gly Trp Ile Ala
      260              265              270
Leu Leu Trp Gly Asp Gln Ile Thr Arg Thr Tyr Leu Gln Phe Ala Gly
      275              280              285
Phe Lys
      290

```

```

<210> 44
<211> 185
<212> PRT
<213> Psuedomonas aeruginosa

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```

      <400> 44
Met Leu Leu Lys Ser Arg His Arg Ser Leu His Gln Ser Gly Phe Ser
  1              5              10              15
Met Ile Glu Val Leu Val Ala Leu Leu Leu Ile Ser Ile Gly Val Leu
      20              25              30
Gly Met Ile Ala Met Gln Gly Lys Thr Ile Gln Tyr Thr Ala Asp Ser
      35              40              45
Val Glu Arg Asn Lys Ala Ala Met Leu Gly Ser Asn Leu Leu Glu Ser
      50              55              60
Met Arg Ala Ser Pro Lys Ala Leu Tyr Asp Val Lys Asp Gln Met Ala
65              70              75              80
Thr Gln Ser Asp Phe Phe Lys Ala Lys Gly Ser Ala Phe Pro Thr Ala
      85              90              95
Pro Ser Ser Cys Thr Pro Leu Pro Asp Ala Ile Lys Asp Arg Leu Gly
      100              105              110
Cys Trp Ala Glu Gln Val Lys Asn Glu Leu Pro Gly Ala Gly Asp Leu
      115              120              125
Leu Lys Ser Asp Tyr Tyr Ile Cys Arg Ser Ser Lys Pro Gly Asp Cys
      130              135              140
Asp Gly Lys Gly Ser Met Leu Glu Ile Arg Leu Ala Trp Arg Gly Lys
145              150              155              160
Gln Gly Ala Cys Val Asn Ala Ala Asp Ser Ser Ala Asp Thr Ser Leu
      165              170              175
Cys Tyr Tyr Thr Leu Arg Val Glu Pro
      180              185

```

<210> 45
 <211> 274
 <212> PRT
 <213> Psuedomonas aeruginosa

<400> 45
 Met Ser Met Asn Asn Arg Ser Arg Arg Gln Ser Gly Leu Ser Met Ile
 1 5 10 15
 Glu Leu Leu Val Ala Leu Ala Ile Ser Ser Phe Leu Ile Leu Gly Ile
 20 25 30
 Thr Gln Ile Tyr Leu Asp Asn Lys Arg Asn Tyr Leu Phe Gln Gln Gly
 35 40 45
 Gln Ala Gly Asn Gln Glu Asn Gly Arg Phe Ala Met Met Phe Leu Asp
 50 55 60
 Gln Gln Leu Ala Lys Val Gly Phe Arg Arg Arg Ala Asp Asp Pro Asn
 65 70 75 80
 Glu Phe Ala Phe Pro Ala Gln Gln Lys Thr Ala Tyr Cys Glu Ala Phe
 85 90 95
 Lys Ala Gly Ser Thr Leu Val Pro Ala Val Val Lys Ala Gly Gln Ser
 100 105 110
 Gly Phe Cys Tyr Arg Tyr Gln Pro Ala Pro Gly Glu Ala Tyr Asp Cys
 115 120 125
 Glu Gly Asn Ser Ile Thr Thr Pro Ser Asp Pro Phe Ala Thr Ala Gln
 130 135 140
 Ala Ile Thr Ala Arg Val Leu Phe Val Pro Ala Thr Ala Asp Val Pro
 145 150 155 160
 Gly Ser Leu Ala Cys Ser Ala Gln Thr Ile Lys Glu Lys Gly Gln Glu
 165 170 175
 Ile Val Ser Gly Leu Val Asp Phe Lys Leu Glu Tyr Gly Val Gly Pro
 180 185 190
 Thr Met Ala Gly Lys Arg Glu Val Glu Ser Phe Val Glu Gln Ala Asn
 195 200 205
 Ile Ala Asp Arg Pro Val Arg Ala Leu Arg Tyr Ser Ala Leu Met Ala
 210 215 220
 Ser Asp Lys Asn Leu Arg Gln Gly Asp Ser Lys Thr Leu Asp Asp Trp
 225 230 235 240
 Ile Thr Leu Tyr Pro Ser Ser Lys Thr Ser Leu Gln Gly Asn Asp Lys
 245 250 255
 Asp Arg Leu Tyr Gln Ile Ala Lys Gly Ser Gln Thr Leu Arg Asn Leu
 260 265 270
 Val Pro

<210> 46
 <211> 172
 <212> PRT
 <213> Psuedomonas aeruginosa

<400> 46
 Met Asn Asn Phe Pro Ala Gln Gln Arg Gly Ala Thr Leu Val Ile Ala
 1 5 10 15
 Leu Ala Ile Leu Val Ile Val Thr Leu Leu Ala Val Ser Ser Met Arg
 20 25 30
 Glu Val Val Leu Glu Ser Arg Ile Thr Gly Asn Val Ile Glu Gln Thr
 35 40 45

Arg Leu Gln Asn Ala Ala Glu Ser Gly Leu Arg Glu Gly Glu Arg Arg
 50 55 60
 Phe Val Asn Thr Leu Arg Pro Pro Glu Pro Gly Thr Gly Cys Thr Ala
 65 70 75 80
 Asp Asn Val Ala Arg Pro Cys Leu Leu Asp Leu Ala Ala Leu Asn Leu
 85 90 95
 Lys Leu Ala Asp Thr His Gln Asn Pro Val Gly Val Leu Lys Gly Ile
 100 105 110
 Ala Asn Thr Trp Met Ser Tyr Arg Gly Ser Asp Ile Ser Ser Ala Thr
 115 120 125
 Thr Ala Gly Asn Ala Leu Gln Arg Ala Val Glu Gln Pro Ala His Ser
 130 135 140
 Leu Gly Arg Pro Gly Gln Arg Ser Gly Lys Pro Arg Ile Arg Gln Pro
 145 150 155 160
 Asp Ala Arg His Arg His Leu Leu Leu Arg Asp Gln
 165 170

<210> 47
 <211> 1161
 <212> PRT
 <213> Psuedomonas aeruginosa

<400> 47
 Met Arg Gly Ile Gly Thr Phe Tyr Tyr Glu Thr Asn Ser Val Ala Arg
 1 5 10 15
 Asn Gln Thr Asn Ser Glu Thr Val Leu Gln Thr Val Ala Arg Pro Ser
 20 25 30
 Leu Tyr Gln Leu Ile Glu Pro Arg Met Lys Ser Val Leu His Gln Ile
 35 40 45
 Gly Lys Thr Ser Leu Ala Ala Ala Leu Ser Gly Ala Val Leu Leu Ser
 50 55 60
 Ala Gln Thr Thr His Ala Ala Ala Leu Ser Val Ser Gln Gln Pro Leu
 65 70 75 80
 Met Leu Ile Gln Gly Val Ala Pro Asn Met Leu Val Thr Leu Asp Asp
 85 90 95
 Ser Gly Ser Met Ala Phe Ala Tyr Ala Pro Asp Ser Ile Ser Gly Tyr
 100 105 110
 Gly Asn Tyr Thr Phe Phe Ala Ser Asn Ser Phe Asn Pro Met Tyr Phe
 115 120 125
 Asp Pro Asn Thr Gln Tyr Lys Leu Pro Lys Lys Leu Thr Leu Val Asn
 130 135 140
 Gly Gln Val Gln Ile Gln Asp Tyr Pro Ala Pro Asn Phe Ser Ser Ala
 145 150 155 160
 Trp Arg Asn Gly Phe Thr Arg Arg Gly Ser Ile Asn Leu Ser Asn Ser
 165 170 175
 Tyr Lys Val Thr Ile Glu Tyr Gly Arg Gly Tyr Asp Lys Glu Ser Thr
 180 185 190
 Ile Lys Ala Asp Ala Ala Tyr Tyr Tyr Asp Phe Thr Gly Ser Ser Ser
 195 200 205
 Trp Asn Arg Thr Asn Gln Ala Cys Tyr Thr Arg Arg Tyr Val Ser Thr
 210 215 220
 Glu Gln Arg Gln Asn Phe Ala Asn Trp Tyr Ser Phe Tyr Arg Thr Arg
 225 230 235 240
 Ala Leu Arg Thr Gln Thr Ala Ala Asn Leu Ala Phe Phe Arg Leu Pro
 245 250 255

Glu Asn Ala Arg Val Ser Trp Gln Leu Leu Asn Asp Ser Asn Cys Asn
 260 265 270
 Gln Met Gly Ser Gly Ser Arg Leu Arg Gln Leu Phe Gln Gln Leu Ser
 275 280 285
 Thr Gly Leu His Arg Ser Thr Ala Gly Glu Leu Leu Gln Leu Ala Gly
 290 295 300
 Lys Thr Phe Gly Gln Trp Trp Tyr Ala Leu Arg Gln Ala Met Thr Arg
 305 310 315 320
 Glu Ala Ser Phe Ser Arg Arg Pro Ala Ser Asn Gly Pro Tyr Ala Tyr
 325 330 335
 Arg Pro Gly Thr Gln Thr Ala Pro Glu Tyr Ser Cys Arg Gly Ser Tyr
 340 345 350
 His Ile Leu Met Thr Asp Gly Leu Trp Asn Asn Asp Ser Ala Asn Val
 355 360 365
 Gly Asn Ala Asp Ser Thr Ala Arg Asn Leu Pro Asp Gly Lys Ser Tyr
 370 375 380
 Ser Ser Gln Thr Pro Tyr Arg Asp Gly Thr Phe Asp Thr Leu Ala Asp
 385 390 395 400
 Gln Ala Phe His Tyr Trp Ala Thr Asp Ala Arg Pro Asp Ile Asp Asp
 405 410 415
 Asn Ile Lys Pro Tyr Ile Pro Tyr Pro Asp Gln Asp Asn Pro Ser Gly
 420 425 430
 Glu Tyr Trp Asn Pro Arg Asn Asp Pro Ala Ile Trp Gln His Met Val
 435 440 445
 Thr Tyr Thr Leu Gly Leu Gly Leu Asn Thr Ser Leu Thr Ser Pro Arg
 450 455 460
 Trp Glu Gly Ser Thr Phe Ser Gly Gly Tyr Asn Asp Ile Val Ala Gly
 465 470 475 480
 Asn Leu Ser Trp Pro Arg Ala Ser Asn Asn Asp Ser Asn Asn Val Tyr
 485 490 495
 Asp Leu Trp His Ala Ala Val Asn Ser Arg Gly Glu Phe Phe Ser Ala
 500 505 510
 Asp Ser Pro Asp Gln Leu Val Ala Ala Phe Gln Asp Ile Leu Asn Arg
 515 520 525
 Ile Ser Gly Lys Asp Leu Pro Ala Ser Arg Pro Ala Ile Ser Ser Ser
 530 535 540
 Leu Gln Glu Asp Asp Thr Gly Asp Lys Leu Thr Arg Phe Ala Tyr Gln
 545 550 555 560
 Thr Ser Phe Ala Ser Asp Lys Asn Trp Ala Gly Asp Leu Thr Arg Tyr
 565 570 575
 Ser Leu Thr Thr Gln Asp Lys Ala Thr Val Gln Thr Asn Leu Trp Ser
 580 585 590
 Ala Gln Ser Ile Leu Asp Ala Met Pro Asn Gly Gly Ala Gly Arg Lys
 595 600 605
 Ile Met Met Ala Gly Ser Gly Thr Ser Gly Leu Lys Glu Phe Thr Trp
 610 615 620
 Gly Ser Leu Ser Ala Asp Gln Gln Arg Lys Leu Asn Arg Asp Pro Asp
 625 630 635 640
 Arg Asn Asp Val Ala Asp Thr Lys Gly Gln Asp Arg Val Ala Phe Leu
 645 650 655
 Arg Gly Asp Arg Arg Lys Glu Asn Ser Asp Asn Phe Arg Thr Arg Asn
 660 665 670
 Ser Ile Leu Gly Asp Ile Ile Asn Ser Ser Pro Ala Thr Val Gly Lys
 675 680 685
 Ala Gln Tyr Leu Thr Tyr Leu Ala Gln Pro Ile Glu Pro Ser Gly Asn

690	695	700
Tyr Ser Thr Phe Ala Glu Ala Gln Lys Thr Arg Ala Pro Arg Val Tyr		
705	710	715
Val Gly Ala Asn Asp Gly Met Leu His Gly Phe Asp Thr Asp Gly Asn		
	725	730
Glu Thr Phe Ala Phe Ile Pro Ser Ala Val Phe Glu Lys Leu His Lys		
	740	745
Leu Thr Ala Arg Gly Tyr Gln Gly Gly Ala His Gln Phe Tyr Val Asp		
	755	760
Gly Ser Pro Val Val Ala Asp Ala Phe Phe Gly Gly Ala Trp His Thr		
	770	775
Val Leu Ile Gly Ser Leu Arg Ala Gly Gly Lys Gly Leu Phe Ala Leu		
785	790	795
Asp Val Thr Asp Pro Ala Asn Ile Lys Leu Leu Trp Glu Ile Gly Val		
	805	810
Asp Gln Glu Pro Asp Leu Gly Tyr Ser Phe Pro Lys Pro Thr Val Ala		
	820	825
Arg Leu His Asn Gly Lys Trp Ala Val Val Thr Gly Asn Gly Tyr Ser		
	835	840
Ser Leu Asn Asp Lys Ala Ala Leu Leu Ile Ile Asp Leu Glu Thr Gly		
	850	855
Ala Ile Thr Arg Lys Leu Glu Val Thr Gly Arg Thr Gly Val Pro Asn		
865	870	875
Gly Leu Ser Ser Leu Arg Leu Ala Asp Asn Asn Ser Asp Gly Val Ala		
	885	890
Asp Tyr Ala Tyr Ala Gly Asp Leu Gln Gly Asn Leu Trp Arg Phe Asp		
	900	905
Leu Ile Ala Gly Lys Val Asn Gln Asp Asp Pro Phe Ser Arg Ala Asn		
	915	920
Asp Gly Pro Thr Val Ala Ser Ser Phe Arg Val Ser Phe Gly Gly Gln		
	930	935
Pro Leu Tyr Ser Ala Val Asp Ser Ala Gly Ala Ala Gln Ala Ile Thr		
945	950	955
Ala Ala Pro Ser Leu Val Arg His Pro Thr Arg Lys Gly Tyr Ile Val		
	965	970
Ile Phe Gly Thr Gly Lys Tyr Phe Glu Asn Ala Asp Ala Arg Ala Asp		
	980	985
Thr Ser Arg Ala Gln Thr Leu Tyr Gly Ile Trp Asp Gln Gln Thr Lys		
	995	1000
Gly Glu Ala Ala Gly Ser Thr Pro Arg Leu Thr Arg Gly Asn Leu Gln		
	1010	1015
Gln Gln Thr Leu Asp Leu Gln Ala Asp Ser Thr Phe Ala Ser Thr Ala		
1025	1030	1035
Arg Thr Ile Arg Ile Gly Ser Gln Asn Pro Val Asn Trp Leu Asn Asn		
	1045	1050
Asp Gly Ser Thr Lys Gln Ser Gly Trp Tyr Leu Asp Phe Met Val Asn		
	1060	1065
Gly Thr Leu Lys Gly Glu Met Leu Ile Glu Asp Met Ile Ala Ile Gly		
	1075	1080
Gln Val Val Leu Leu Gln Thr Ile Thr Pro Asn Asp Asp Pro Cys Ala		
	1090	1095
Asp Gly Ala Ser Asn Trp Thr Tyr Gly Leu Asp Pro Tyr Thr Gly Gly		
1105	1110	1115
Arg Thr Arg Phe Thr Val Phe Asp Leu Gly Arg Gln Gly Val Val Gly		
	1125	1130
		1135

Leu Glu Ile Arg Leu Thr Gly Thr Thr Arg Arg Asn Val Gly Asn Pro
 1140 1145 1150
 Val Pro Ser Arg Lys Ala Trp Glu Ala
 1155 1160

<210> 48
 <211> 115
 <212> PRT
 <213> Psuedomonas aeruginosa

<400> 48
 Met Lys Val Leu Pro Met Leu Leu Ala Leu Ala Val Pro Gly Leu Cys
 1 5 10 15
 Trp Ala Glu Asp Pro Gln Thr Phe Glu Gly Ala Gly Val Val Phe Glu
 20 25 30
 Val Gln Val Glu Lys Asn Leu Val Asp Ile Asp His Arg Leu Tyr Arg
 35 40 45
 Leu Pro Asn Ser Thr Val Arg Asn Gly Met Pro Ser Leu Phe Gln Val
 50 55 60
 Lys Pro Gly Ser Val Val Ser Tyr Ser Gly Thr Val Ser Gln Pro Trp
 65 70 75 80
 Ser Thr Ile Thr Asp Ile Tyr Ile His Lys Gln Met Ser Glu Gln Glu
 85 90 95
 Leu Ala Glu Met Ile Glu Lys Glu Gln Pro Arg Gln Asp Gly Glu Glu
 100 105 110
 Gln Pro Arg
 115

<210> 49
 <211> 141
 <212> PRT
 <213> Psuedomonas aeruginosa

<400> 49
 Met Arg Thr Arg Gln Lys Gly Phe Thr Leu Leu Glu Met Val Val Val
 1 5 10 15
 Val Ala Val Ile Gly Ile Leu Leu Gly Ile Ala Ile Pro Ser Tyr Gln
 20 25 30
 Asn Tyr Val Ile Arg Ser Asn Arg Thr Glu Gly Gln Ala Leu Leu Ser
 35 40 45
 Asp Ala Ala Ala Arg Gln Glu Arg Tyr Tyr Ser Gln Asn Pro Gly Val
 50 55 60
 Gly Tyr Thr Lys Asp Val Ala Lys Leu Gly Met Ser Ser Ala Asn Ser
 65 70 75 80
 Pro Asn Asn Leu Tyr Asn Leu Thr Ile Ala Thr Pro Thr Ser Thr Thr
 85 90 95
 Tyr Thr Leu Thr Ala Thr Pro Ile Asn Ser Gln Thr Arg Asp Lys Thr
 100 105 110
 Cys Gly Lys Leu Thr Leu Asn Gln Leu Gly Glu Arg Gly Ala Ala Gly
 115 120 125
 Lys Thr Gly Asn Asn Ser Thr Val Asn Asp Cys Trp Arg
 130 135 140